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AUTHOR Roberts, Thomas Bradford; Clark, Frances Vaughan
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ABSTRACT

The introduction to this booklet states that transpersonal psychology focuses attention on the human capacity for self-transcendence as well as self-realization, and is concerned with the optimum development of consciousness. This booklet attempts to illustrate the value of this psychology in education, not as a complete substitute for traditional educational psychologies, but working in conjunction with them. The first section, "Current Classroom Application," discusses the following ways of shifting the focus from external to internal awareness: relaxation and concentration, guided fantasy, and creativity. Section 2, "Altered States of Consciousness," stresses that open discussion of altered states of consciousness can inform students of ways of exploring and controlling consciousness without the use of drugs. Discussed in this section are dreams, meditation centering, biofeedback, parapsychology, spirituality, and growth potential. The final section, "Future Trends and Implications," highlights possibilities for transpersonal psychology in research, teacher education, and philosophy. (JA)

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TRANSPERSONAL PSYCHOLOGY IN EDUCATION

By Thomas Bradford Roberts
and
Frances Vaughan Clark

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A revolution in psychology usually foreshadows a revolution in education, and the current developments of a new psychology raise a number of questions and possibilities for educators. The new psychology is called "transpersonal" psychology. It is re-asking basic educational questions: What are the limits of our capacity for learning? Can we learn to use our minds in ways which surpass our present expectations? Are there new ways of teaching which are superior to our current methods? Are there different kinds of learning which we are failing to develop? This booklet describes the emerging psychology, then outlines some of its educational applications, first to the classroom, then to teacher education and research.

TRANSPERSONAL PSYCHOLOGY

The development of a comprehensive educational psychology requires a theoretical framework which includes all the phenomena related to human learning, and must therefore include areas of human experience which previously have been ignored by traditional academic psychology. Freudian, behavioral, and humanistic psychologies are seen as useful, but incomplete psychologies. Transpersonal psychology offers a more inclusive vision of human potential, suggesting both a new image of man and a new world view. Using transpersonal psychology in education does not require a complete rejection of established educational psychologies, but may be used in conjunction with them. Conflicts occur at some points, and agreement occurs at others.

An underlying assumption of transpersonal psychology is that physical, emotional, intellectual, and spiritual growth are interrelated, and the optimal educational environment stimulates and nurtures the intuitive as well as the rational, the imaginative as well as the practical, and the creative as well as the receptive functions of each individual. Transpersonal psychology has focused attention on the human capacity for self-transcendence as well as self-realization, and is concerned with the optimum development of consciousness.

Most topics being investigated by transpersonal psychologists consist of the psychological aspects of at least one of the following: a new image of man and a new world view, altered states of consciousness (including meditation, dreams, etc.), impulses toward higher states (such as peak experiences), self-realization and self-transcendence, subjective experience and inner states,

spiritual growth, parapsychology and psychic phenomena, other cultures and their psychologies (especially Eastern psychologies), newly discovered forms of energy, recent physiological research (such as voluntary control of internal states), and evolving consciousness.

Many psychologists judge that we use less than 10 percent of our capacities. Transpersonal psychologists are seeking to increase our understanding of human abilities in order to unlock some of our latent potentials. How can we learn to use some of the abilities which may be hidden in our own minds? A partial answer may be found in studying people who have unusual abilities, and in the cultural, social, and psychological factors affecting their development.

Transpersonal psychology gives us a new perspective on the old Delphic precept, "Know thyself." In turning our attention to the inner world of man, we are indeed discovering a wealth of unsuspected resources. Many of the transpersonal techniques for using inner imagery in the process of self-discovery are well suited to classroom use, and may easily be introduced in the existing educational system. As the universal language of human experience, inner imagery finds expression in all forms of creativity, be it artistic, scientific, or philosophical. As a student becomes familiar with his own inner resources, he develops a new awareness of his individual uniqueness and his relationship to others and the environment. Research in transpersonal psychology has indicated that working with imagery can have a beneficial effect on physical, emotional, mental, and spiritual well-being. It is important that we begin to give students access to these tools that can be used for continuing growth and awareness throughout their lives. In applying transpersonal psychology to education, both students and teachers can assume responsibility for making choices, and develop a sense of inner direction in their lives.

CURRENT CLASSROOM APPLICATIONS

The first step in applying transpersonal psychology to education usually involves shifting the focus from external to internal awareness. As students become aware of their own inner states, they can begin to recognize important conditions which affect their learning ability.

Relaxation and Concentration

Can you remember a time when you were concentrating so intently on something, perhaps a hobby, a sport, or some creative endeavor, that you lost all sense of time and were able to think and act super-efficiently? Or can you remember a time when you were so clearheaded you learned a complex task easily? This state of mind, which occurs spontaneously at random, can also be consciously developed. Although a person's state of mind is a major variable in how well he performs, we seldom teach people to move into an appropriate state of mind before undertaking a task. Investigating such states of mind has been the focus of transpersonal psychologists who are interested in self-induced altered states of consciousness evidenced in psychic healing, parapsychological phenomena, yoga, biofeedback, and meditation. Teaching the voluntary control of internal states is one area of transpersonal psychology which is easily applied to education, and the first step is the introduction of relaxation training. Relaxation training is important both for everyday functioning and as a beginning step to more advanced training in meditation and concentration. The immediate effects of relaxation can be experienced both by teachers and students, and

many who have tried it find short periods of intensive relaxation to be of considerable benefit.

For example, a German teacher had a class in which the students seemed too keyed up for their own good. "Whenever we would have a Unit Test, always a biggie in their minds, no matter how much I would try to play it down, the tenseness would permeate the classroom." In one unit test, his ten students scored 5 A's, 3 B's, and 2 C's. The following unit test had proved to be more difficult in previous years, so he tried to improve their recall and ability, not by pushing and drilling them harder, but by relaxing them at the time of the test. Here is his report:

> Well, I chanced the great experiment. My only worry was the time element. The 48 minute class period was cut to 38 minutes as I darkened the room and played a commercial relaxation tape received from a friend. The students sat in their seats, heads down on their forearms, legs uncrossed; then I took them on and through an original fantasy journey in the German language. This particular part had to be condensed into 8 minutes, because of the time element. With about 28 minutes of time left, the students proceeded to work on the test which usually takes at least 30 to 35 minutes to complete. Observing the students while they were writing and thinking, I detected the total absence of nail-chewing and the usual pencil tapping on the desktops and nervous, quick glances at the clock. Everybody finished the test on time. Grading the test was fun; 7 A's and 3 B's was the obvious result. The quality of writing in some of the usually more sloppy papers improved markedly. The students just could not believe this. It was only after I explained to them that a lot of their learned knowledge was not able to surface because of their nervousness and fear and the tension, and once they were relaxed, the learned storehouse of information was able to be tapped.

Other teachers who have taught their students to relax find similar results. Some students who catch on to the techniques use them to reduce tension in other classes as well as in up-tight social situations when they want to feel more at ease.

These exploratory applications of relaxation training need not be taken as proof that relaxation will automatically improve test scores, but these intriguing findings keep reappearing, and indicate an area where further investigation and experimentation

may lead to the development of transpersonal teaching methods. The fact that students are able to improve their recall by controlling their breathing, relaxing their muscles, and learning to direct their own attention exemplifies two important principles: First, our behavior is influenced by *internal* states, and these states can be controlled voluntarily. Second, the mind and body are inextricably connected. When we control one, the other is inevitably affected.

Effective methods of mind/body control have been practiced in yoga for thousands of years, yet we are only beginning to explore the possibilities of mind/body learning. Training in deep relaxation has immediate physical benefits, since it can help people fall asleep quickly and gives the body a chance to revitalize itself in brief periods of time. Some coaches say they have found that it allows their athletes not to waste their energy in pregame nervousness, but to consciously direct their own levels of activity by selecting the right amount of energy for the task at hand. Relaxation is a prime mental/physical ability that people can use daily throughout their lives. As such it certainly deserves a place in the physical education curriculum alongside the rules of badminton and the techniques of wrestling take-downs.

In schools, relaxation is easily combined with concentration. After the students are relaxed, then they can direct their attention toward academic content, or they can let their minds idle in creative association. Aldous Huxley could select his degree of relaxation and breadth of concentration when he worked. If his wife were home, he would not hear the doorbell or telephone, but if she went out, he would hear them. In his "deep reflection," as he called it, he had almost perfect recall. Probably everybody has had instances of becoming so involved in reading or working that he temporarily forgets himself, and then is able to remember or accomplish much more than usual. Perhaps we could all learn to do this at will, maybe not as well as Aldous Huxley, maybe better. The challenge to educators is: Can we learn to do this so that we can do it whenever we want? Can we teach others to do it too?

Guided Fantasy

One method of facilitating concentration and directing attention

is guided fantasy. Specifically, directed fantasy trips are useful for learning specific content, while open-ended fantasies evoke creativity and aid self-discovery. The following example illustrates the use of guided fantasy as an aid to learning content in an electronics class.

> I took my beginning electronics class on a fantasy trip into that mysterious land of invisible magnetic and electric fields surrounding the windings and core of a transformer. The procedure was as follows. The room was darkened and everyone put their heads down on the desks and were told to relax and empty their minds. Prior to beginning the journey a relaxation exercise was performed. . . . Everyone was told to imagine themselves as an electron and to concentrate on what it might feel like to be such an incredibly small piece of [negatively charged] matter . . . They were to encounter two very large coils of wire, and around the wire there was a huge and rapidly changing force field. They were to enter the force field and feel the effects of it. They were then told to enter the wire of the coil and experience the movement of the rest of the electrons within the coil of wire as they were affected by the rapidly changing force field, which is the electromagnetic field. . . . I told the students that another coil of equal size and strength was coming toward them. The two fields were interacting, and the interaction became very violent the closer the coils came to each other. The students were told that the increase in strength of one coil caused an increase in the strength of the other coil. This produced a super-strong force which moved the electrons (students) very fast. . . .
>
> [After a waking period, the teacher turned on a small light and discussed the experience with them.]
>
> The next day the students read the chapter in the book dealing with inductive coils. The students said they had no trouble visualizing the forces described in the book, and their qualitative work in the lab seemed to bear this out. It is quite evident to me that the trip was worth taking since I have taught this subject matter before but not with this much success.

Teachers who have used the fantasy journeys hold a key to improved instruction: less stimulation, not more, and temporary escape from the stimulus overload of a hectic, rushing world of school halls and ringing bells.

Why do fantasy journeys work? This is a good question for educational researchers. Recent speculations of neurophysiologists

studying the brain suggest that the left hemisphere of the brain thinks in words and clearly defined symbols such as chemical and mathematical symbols. It is active, calculating, reasoning, and is predominantly sequential and analytic in its functioning. The right hemisphere, on the other hand, is spatially oriented, thinks in pictures, perceives patterns as a whole, and operates in an intuitive, emotional, and receptive mode.

Although the "sidedness" of mental functions is highly speculative because it is based on split-brain research, Robert Ornstein's metaphorical use of "right-function" and "left-function" is relevant to educators. According to researcher Ornstein:

> It is the polarity and the integration of these two modes of consciousness, the complementary workings of the intellect and the intuitive, which underlie our highest achievements.

Most of our education, which emphasizes verbal knowledge and reasoning, is predominantly left-brain education. Guided fantasy offers the possibility of engaging the right half of the brain in the learning process. We know that experience is the best teacher and that teaching is easier when students have had relevant experiences. Some things, however, are difficult or impossible to experience directly. The use of fantasy, however, can give students an imaginary experience which they can relate to the verbal, logical material which is usually presented in class. In this way, material geared to left-brain learning can be connected to the more diffuse, intuitive knowing of the right side. Providing students with experiences to match the usual didactic instruction may also be a key to unlocking creative insight and intuitive understanding. Perhaps when something suddenly "makes sense" or "rings true," it is an instance of making a connection between the two modes of knowing. Becoming aware in the left side of the brain of what the right side had intuitively known but had not been able to verbalize may be experienced as a flash of insight.

Philosophers and psychologists of education, as well as teachers, curriculum planners, textbook writers, and material makers can learn from Ornstein's brain research that the linear, verbal-intellectual mode of knowing is clearly not the only mode avail-

able to man. What are other ways of teaching for other modes of learning? The field is open for reconceptualizing what it means to teach and to be educated, for creative classroom innovations, for research on new teaching styles, and for the development of new topics of study and supporting educational materials.

Learning to understand and control one's own consciousness includes learning to pay attention to what one wants when one wants to, instead of being at the mercy of a roaming, untrained mind. Learning how to relax, concentrate, and freely associate are skills which we seldom teach, but which give evidence of improving current instruction. They are also basic skills for developing further transpersonal potentials, in school, outside of school, and later in life.

Creativity

Transpersonal psychology is also offering new insights into the nature of the creative process and how it can be stimulated. It is evident that allowing time for reverie and free flowing imagery, encouraging visualization and new configurations of existing patterns, and withholding critical thinking and analysis temporarily are important aspects of the creative processes which are characteristic of creative scientists as well as creative artists.

> The words of the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The physical entities which seem to serve as elements in thought are certain signs and more or less images which can be "voluntarily" reproduced and combined. . . . The above mentioned elements are, in any case, of visual and some of muscular type. Conventional words or other signs have to be sought for laboriously only in a secondary stage, when the mentioned associative play is sufficiently established and can be reproduced at will.
>
> —Albert Einstein

Edith Weisskopf has formulated a useful way of thinking about creativity in education, presented as a four-stage process. If we add some speculations suggested by Ornstein's brain re-

search, each step appears to be associated with a particular mode of brain function, and with an appropriate method for teaching and learning.

(1) preparation	(2) incubation	(3) illumination	(4) verification
left side	right side	left becoming aware of right	left side
learning facts, cognitive knowledge, verbal, memory	relaxation and letting mind wander, holistic, preverbal association	insight, tuning the left side in to the right side, intuitive, transition from preverbal to verbal	testing hypotheses, experimentation, cognitive reasoning, verbal analysis, critical thinking
conscious	unconscious	preconscious	conscious

It is evident that the scientific method we are accustomed to teaching is just half the method, predominantly step one and step four, both of which pertain to the reasoning half of the brain. If we look at how the most creative scientists such as Einstein actually describe their work, they report intuitive visualization, namely right-brain activity, comes first, followed by reasoning. Some scientists describe actually seeing the abstractions they think about. For example, Friedrich von Kekulé discovered the benzene ring and other insights pertaining to organic chemistry using a creative visual reverie, a mild altered state of consciousness commonly described as a daydreaming state. Apparently he was skilled at moving back and forth between stages two and three and had the background and knowledge to provide the raw materials for his thoughts and the laboratory skills to verify his insights. This type of thinking is typical of creative mathematicians and scientists. The creative artist must also master the tools of his trade in order to give form to his creative inspirations. It is widely accepted that technical skill is a necessary but not a sufficient condition for creativity.

While we cannot expect a creative genius in every school child, we may be able to develop creative abilities by showing

people how to tap the unused potentials of their minds. This can have very practical benefits. An experiment several years ago used psychedelic agents as a way to trigger creative consciousness among a group of professionals who had been working on particularly intractable problems for some months. With stages one and two already completed, they were at stage three and used mescaline to stimulate illumination. A follow-up study several months later showed that most of the ideas generated had resulted in practical solutions in architecture, engineering, and even theoretical physics. The point here is not that psychedelics stimulate creativity, but that inside each of us there are reservoirs of untapped knowledge as well as practical skills and ideas which can be elicited. While some psychoactive drugs may stimulate communication between the left and right hemispheres of the brain, there are less risky, more reliable ways of releasing creative potentials. Fantasy journeys, as described above, are evidently one way of initiating the process. Teaching so-called "scientific method" which omits ways of using these transpersonal potentials is historically inaccurate and psychologically unsound. Reason is important, but is only half the process.

ALTERED STATES OF CONSCIOUSNESS

Western psychology has traditionally recognized only three states of consciousness, namely waking, dreaming, and dreamless sleep. Meditation, daydreaming, hypnosis, etc. have been considered variations of the waking state. In contrast, Buddhist psychology identifies well over a hundred different states of mind. Eastern psychologies apparently are more conceptually and theoretically sophisticated than Western psychologies in matters of subjective experience and altered states of consciousness.

The importance of altered states of consciousness for psychology was first recognized by William James, who stated:

> Our normal waking consciousness, rational consciousness, as we call it, is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. . . . No account of the universe in its totality can be final which leaves these other forms of consciousness quite discarded.

Some altered states are currently off limits for use in schools but may nevertheless be discussed. Hypnosis, for example, should be practiced only by a qualified hypnotherapist, but it is a fascinating topic for class discussion. Popular misconceptions regarding hypnosis can be cleared up easily in discussion with a well informed teacher. Self-hypnosis deserves attention as a tool for accelerating learning as well as a method of gaining voluntary control over physiological functions.

Psychoactive drugs, including alcohol, coffee, and marijuana are on many student's minds. Andrew Weil, author of *The Natural Mind*, says people have an innate desire to alter con-

sciousness. Forcing this topic underground, like forcing the topic of sex underground, results in misinformation, rumors, and unfortunate experiences. Open discussion of altered states of consciousness can throw some light on this mysterious topic and inform students that there are effective non-drug ways of exploring and controlling consciousness. A complete drug education program should recognize the natural human desire for exploring consciousness and should provide acceptable alternative routes.

Dreams

What is important for education is the fact that altered states of consciousness, particularly the dream state, are eagerly picked up by students at all levels of education as a topic of study. Dreaming is an altered state that is being used successfully by teachers both as technique and as content. From a transpersonal point of view, dreams are important because they give us messages from the unconscious, and they afford easy access to a different reality. Dreaming is one door to our inner selves. Furthermore, there is a considerable body of research on dreams, and dreaming is a state readily available to almost everyone.

Questions of how to interpret dreams will inevitably be a part of any classroom discussion. It is advisable for the teacher to point out that there are many different approaches to dream interpretation, and that each person can get more out of his dreams by exploring his own feelings and associations to the dream than out of a standard interpretation of symbols occurring in the dream. Interpretations often lead to blocking and forgetting of dreams, as well as being potentially destructive or misleading. When using dreams as a source of creativity or as a beginning of self-exploration, it is therefore advisable not to interpret the dreams, but to accept them as messages, or stories, one is telling oneself.

If some students have difficulty remembering dreams, they can be reassured by a suggestion that if they do not remember one, they can make one up. Allowing a few minutes of quiet time before working with dreams can help the recall process and allow time for anybody who wants to make one up to do so.

Initially, it is not important whether the dream is an actual dream or a made up dream. Either way the student has a chance to explore and express his creative imagination.

Some methods which can help people remember dreams include lying quietly for a few minutes after waking up and reviewing dreams or dream fragments; setting an alarm in order to wake up at different times during the night to catch a dream in process; keeping a tape recorder or a paper and pencil next to the bed to record dreams immediately. Dreams which can be easily recalled immediately after waking, may be forgotten in a short time, so it is a good idea to record them as soon as possible. Sharing dreams can often be a way of remembering more dreams, and listening to others may also remind a person of dreams he has forgotten.

Dreams can often be used as starting points for personal exploration in fantasy. Finishing an interrupted dream in imagination, or participating in the imaginary ending of a dream can be an intriguing exercise. Frequently when a person learns to overcome difficulties in fantasies and dreams, the learning is reflected in an improved ability to handle difficult situations in the external world. Solving problems in imagination is one way to develop creative problem solving ability.

Keeping a dream diary can help even young children see recurring dreams and recurring themes from different dreams. Often the feeling that different dreams are related is a more reliable indicator of their relationship than reasoned comparison of their content. Asking students to retell their dreams in a dimmed classroom following relaxation helps the sharing process. One teacher completed her instructions this way: "After we have discussed one person's dreams and have given our own visualizations as well as emotions during that time, we will move to someone else. It is also important for you to know that you are invited to share your dreams which are, in effect, your inner life, only to the degree that you feel comfortable doing so."

The chairman of a high school English department used dreams this way:

> I told them that I wanted them to be very quiet and try to crawl back inside their dream for about five minutes to "see" the way it was and to recapture the feeling the dream gave them. Then, they

were to write just as fast as they could without worrying about literary style or mechanics. Their purpose was to get as much of their dream as possible down on paper in vivid, sharp, detailed language.

We turned out the lights and pulled the drapes. The room became semi-dark and very, very still.

I had expected some resistance or at least some embarrassed uneasiness; there was none. Some students leaned back and stretched their legs out in front of them; others put their heads on their desks; some just sat with their eyes closed. After about five minutes, one or two began to write. One by one in the next few minutes, they all began. No one broke the silence until a few seconds before the bell rang when I asked them to bring their papers (many of which were finished by this time) with them the next day.

At the beginning of the period the following day I asked them to go through what they had written and to select the most vital parts of their dream and the most vivid wording. Using what they selected, they were to write a poem. (We had only begun poetry, having spent two days of individual browsing/reading in poetry collections.) My only instructions to the students were that they should not try to use rhyme and they should "squeeze out" every excess word. . . .

The assignment, I felt, was a success for a number of reasons: 1. Everyone had something to write about. 2. The students were fascinated by dreams and uninhibited about sharing them. 3. The vivid quality of dreams lends itself to poetic expression.

It was, I think, the best first experience in poetry that I have ever tried.

Working with dreams carries the implicit message that the dream state is useful and worth studying. It gives students practice in using an altered state of consciousness and may encourage the exploration of other altered states which contain further resources that can be made available. An educational corollary to William James' statement is: No education of man can be complete which leaves these potential forms of consciousness undeveloped.

Meditation and Centering

Meditation has already received some coverage in educational journals. Studies of the transcendental type of meditation show

improved self-control, improved social relations with fellow students, teachers, and parents, decreased drug abuse, improved grades, and increased self-actualization. The Illinois House of Representatives resolved, ". . . that all educational institutions, especially those under State of Illinois Jurisdiction, be strongly encouraged to study the feasibility of courses in Transcendental Meditation. . . ." Counselors trained in Zen meditation improved their scores on self-actualization and on empathy measurement scales. Meditation has also been found helpful to athletes and effective in other forms of physiological control. Hatha yoga, which has already been introduced in some departments of physical education, is one way of teaching mind/body relationships. Various kinds of meditation are forms of altered states of consciousness which have many different uses in education.

Meditation offers anyone who engages in it seriously the challenge of learning to do what he wants to do with his mind. A novice may be surprised by his inability to concentrate and find it difficult to follow instructions to just sit. As he learns to quiet his mind and focus his attention, the resulting peace of mind is its own reward. However, other beneficial effects of meditation are invariably reported in the research. The process of turning the mind inward and focusing on a central point is sometimes described as centering. Concentration is a way in which the mind can begin to know itself. Whether the concentration is on an external aid to meditation such as a flower, candle flame, or mandala, or on an inner visualization, or on a sound such as a mantra, the process is essentially the same.

Centering exercises provide a good introduction to meditation, and are also helpful in quieting down. The process of centering can begin by focusing attention on the physical center of gravity in the body, feeling the relationship of the body to the earth and the space surrounding it. Experiencing the sense of balance and support provided by the floor or the chair helps to focus attention on physical sensations. Attention may be directed to the surface of the skin, body boundaries, and the flow of energy associated with the circulatory system. In many Eastern traditions, including the Japanese martial arts, the center of physical energy is located in the belly, about two inches below the navel, and two inches in front of the spine. Focusing attention on this center

while noticing the movements of breathing in and out is an easy and widely used method of centering. Centering has a calming effect which makes concentration easier and helps students let go of distracting anxieties by focusing on being here and now. A good question to ask after giving instructions for relaxation or centering is "How does it feel to be you at this moment?" Do not expect a verbal answer. Allowing an experience of feeling without having to explain or name it is an important step in learning about oneself.

Another way of introducing meditation in a classroom is simply to suggest that students spend five minutes sitting in silence, with eyes closed. Additional instructions may be given, such as counting breaths from one to ten, and then starting at number one again, or visualizing a symbol such as a circle, cross, or triangle. Such additional instructions may make it easier for beginners to remain quiet and still, but are not essential. The instructions may be equally effective when students are asked to just sit. As the practice becomes more familiar, the period of time can be increased to twenty or thirty minutes, depending on the circumstances. Images which often emerge spontaneously during a period of meditation may also be a source of subject matter for discussion. Such imagery may be treated in the same way as dreams. A popular form of meditation among those who have not tried it before is observation meditation, where the students are instructed to simply observe themselves, and whatever is present on the physical (sensations), emotional (feelings), and mental (thoughts) levels. This process often facilitates awareness of inner imagery.

Some forms of meditation are defined as an active approach to making contact with transpersonal levels of awareness. Others emphasize a shift from the active to the receptive mode of consciousness; here the process is one of allowing rather than directing, of being rather than doing. The student who is introduced to meditation in a classroom setting may wish to find a teacher of meditation in order to pursue the practice more in depth in any one of many different approaches. More advanced practice need not concern us here. It is enough to know that there are numerous effective meditative techniques which can be effective adjuncts to education.

Biofeedback

Biofeedback has been widely reported in the professional and popular press, and there is little need to go into detail here except as it applies to transpersonal educational interests. By amplifying activities inside the human body so that we can listen to internal processes such as heart beat, blood pressure, brain activity, skin resistance, and many more, much of the autonomic nervous system can be brought under voluntary control. These previously hidden abilities of self-control open up whole new ranges for teaching physical education, health, and/or biology.

After seeing the film, *Involuntary Control,* at Sycamore High School in rural Illinois, some of the students tried some inexpensive biofeedback equipment borrowed from Northern Illinois University. One adolescent boy showed remarkable ability to raise and lower his galvanic skin response, a measure of general emotional excitability. "You can sure tell the girls I like," he said, as he looked from one to another around the room. By listening to the tone of the machine and by correlating it with his internal feelings, he was able to combine awareness of his own feelings with biofeedback knowledge from the galvanic skin response machine. If physical education means learning to control our bodies for optimum health and physical fitness, biofeedback has an important place coming in the curriculum of the late 1970s.

> If every young student *knew* by the time he finished his first biology class, in grade school, that the body responds to self generated psychological inputs, that blood flow and heart behavior, as well as a host of other body processes, can be influenced at will, it would change prevailing ideas about both physical and mental health. It would then be quite clear and understandable that we are individually responsible to a large extent for our state of health or disease. Perhaps then people would begin to realize that it is not life that kills us, but rather it is our reaction to it, and this reaction can be to a significant extent self chosen.
>
> (E. Green, A. Green, D. Walters, "Biofeedback for Mind-Body Self-Regulation: Healing and Creativity." Menninger Foundation)

Biofeedback training also provides an interesting link between transpersonal psychology and behavioral psychology. The way a person learns to control these previously automatic functions is simply by being rewarded for doing the right thing to achieve his

purpose, whether it be to cure a migraine headache, slow down his heart, or increase blood flow to injured organs. Even though he usually cannot explain what he is doing or how he is doing it, the feedback that he is accomplishing it is enough reward to improve his performance.

An even more exciting link is being explored between the biofeedback conditioning of brain waves and parapsychology. The biochemical activities of the brain produce electrical current that pulses at different speeds:

delta	0-4 times a second
theta	5-7 times a second
alpha	8-14 times a second
beta	15-30 times a second

Different frequencies predominate as a person goes into different kinds of awareness. For adults, beta is the normal waking state; alpha is a relaxed state bordering sleep; theta is associated with dreams; and delta is very deep sleep or coma. These frequencies are also associated with various altered states of consciousness. Some provocative research conducted by the Greens at the Menninger Foundation, and by Stanley Krippner and Montague Ullman at Maimonides Hospital in Brooklyn, indicates that both creativity and telepathy may be enhanced by alpha and theta conditioning. Yogic Masters develop complicated and precise control of their physiology, including brain waves. Could this partially account for the paranormal power attributed to advanced yogis? Could this physiological control also account for some instances of psychic healing?

Parapsychology

Parapsychological topics make excellent class reports. Students enjoy learning about parapsychology and doing their own experiments. The readings may be newspaper articles, inexpensive paperbacks, or highly statistical journal articles. Subjects which were formerly taboo for "respectable" psychologists are opening up, and they provide an excellent example of how fields of knowledge change with the times. One of the hardest ideas to get across to students is that things are not always true or false. With scientific controversy surrounding parapsychology, it pro-

vides a natural topic for teaching how science expands to include new observations and how our ideas of acceptability adjust from time to time.

Since many people see parapsychology in the gray area between belief and disbelief, a good teacher can capitalize on this to teach students that it is perfectly respectable intellectually to be undecided about conflicting information and that knowledge progresses by exploring these gray areas. One way to teach about parapsychology and other transpersonal topics is to treat them similarly to the way the theory of evolution was taught earlier in this century. They can be presented as ideas which some people believe and others don't, without necessarily having been proven true or false. A teacher can simply say, "Here is what some psychologists are saying . . . and here is the reasoning that disbelievers use. . . ." The confrontation is taking place between people who cite empirical evidence and want to change ways of thinking, and those who side with accepted ways of thinking and criticize the evidence: a classic battle between observation and reason.

Parapsychology is the scientific study of facts which do not fit in with the established theories of man which assume that he knows the world only through his senses. Selections from books such as *Psychic Discoveries Behind the Iron Curtain*, *ESP: A Curriculum Guide*, and *Dream Telepathy* can guide teachers. Investigation into parapsychology leads into other transpersonal areas too, as parapsychology is often linked with dreaming, relaxed receptivity, and other altered states. For example, states of consciousness associated with the alpha and theta brain wave patterns are frequently associated with parapsychological events in which ordinary limitations of time and space are apparently transcended. Movies on parapsychology are also informative and provocative, and are primarily oriented toward high school and college audiences.

Stanley Krippner, president of the Association for Humanistic Psychology, and Gardner Murphy, past-president of the American Psychological Association, suggest links between successful teaching and student-teacher ESP. There is also some evidence that parapsychological abilities are not just "gifts" or inherent traits, but that they can be learned.

Investigation of the phenomena of transcendence and peak experiences has also reawakened interest in spiritual experiences associated with higher states of consciousness, sometimes called cosmic consciousness, mystical union, or enlightenment. Barry McWaters has indicated:

> Within the past five years there has been a resurgence of both personal and empirical exploration of altered states of consciousness in which the individual experiences himself as having transcended the limitations of his ordinary waking consciousness. Physical phenomena, such as clairvoyance and astral projection, and religious phenomena, such as speaking in tongues and mystical union, are examples of transpersonal experiences.
>
> (Barry McWaters, "An Outline of Transpersonal Psychology: Its Meaning and Relevance for Education")

Some transpersonal psychologists are attempting a systematic study of spiritual experiences. Mystics, psychics, physicists, and other scientists often report their perceptions of the universe in almost identical terms. Furthermore, if adjustments are made to account for cultural differences, mystics from all over the world agree on the phenomenology of mystic experiences. Research on psychic healers at the Menninger Foundation indicates that some healers describe a "field of mind" that surrounds the earth just as the magnetic, radiation, and gravitational fields surround it. Healers seem to be able to tune in to this force, suggesting the possibility that other people can learn to do this, perhaps through biofeedback training or developing other self-controlled altered states of consciousness.

Interest in man's spiritual aspirations forms one of the historical and conceptual links between transpersonal psychology and humanistic psychology. A. H. Maslow, one of the founders of humanistic psychology, proposed a five-stage theory of human motivation. In his studies of self-actualizers he discovered that this group reported peak experiences more frequently than other groups. Following this lead brought him to the study of transcendent experiences. In some of his later work he describes two kinds of self-actualizers, and seemed on the verge of adding a sixth stage of motivation: self-transcendence, or a motivation for cosmic consciousness. Humanistic psychologists have used

the first five stages in counseling, teaching, and planning curricula. Perhaps a sixth, transcendent, stage would be helpful in considering student motivation.

Assuming such motivation helps explain why students like certain kinds of drug highs, and it simultaneously suggests that schools can help reduce drug abuse by teaching alternate means of achieving higher states of consciousness. Peak experiences and altered states occurring in poetry and prose are readily available for exploration. They are useful concepts in the literature of self-actualization and can serve as a focus for developing language skills. In social studies or other classes which consider why people do things, the desire for spiritual or transcendent experiences helps explain human behavior. For example, much religious and cultural conflict stems from disagreement over what mystical experiences are and who has the best way of achieving them, leading to religious wars, persecution, and other intercultural conflicts. The interpretation of transcendent experiences is central to the religions and world views of different cultures. Transpersonal psychology is useful in its acceptance and study of transcendent, or spiritual, experiences as an important aspect of human nature and a legitimate field for psychological investigation. The scientific interest in transcendent experiences should not be confused with teaching religion. From a psychological standpoint, experiences are considered empirically, without resorting to metaphysical interpretation or dogmatic assumptions. As in working with dreams and fantasy, interpretations are likely to inhibit sharing of experience, and a student's subjective interpretation of his own experience should be respected.

Growth Potential

After visiting a growth center and reading some articles on transpersonal psychology, an eighth-grade teacher developed a unit called "Growth Potential." The main theme was that all human beings have vast potentials that are seldom used. He included unusual cases of physical prowess and athletic records, new inventions and medicines, suggestibility, parapsychology, fantasy, and other neglected human skills. "Everyone seemed to

enjoy the experience," he reported. "The only problem for me was the insistence on doing it again. Imagination, creativity, frank and open discussion were all results of what we had tried."

Teachers are often surprised at how eagerly students respond to transpersonal teaching techniques. Some of these approaches seem to awaken the natural desire in each of us to explore our inner selves:

> I have been overwhelmed by the willingness and ability of the children to remain completely still, without a motion, for 30 minutes. Six months ago I would have laughed at the idea. Julio Sanchez, an extremely active child, seems calmed down considerably. He also gets down to work much more quickly. . . . We talked about the directed dreams of Malayan children and the different ways in which dreams could better be remembered or evoked. During all of our talks the class (6th grade) was in a state which only elementary teachers really understand. All eyes on whoever the speaker was, no outside interruptions, mouths open. Once started it was amazing how eagerly children want to look inward and learn about themselves.

This teacher's experience is typical. The first time an unusual teaching technique is tried, there may be some resistance or silliness, but it almost always disappears the second time. Is this because we all have a natural desire to explore inner potentials? Perhaps dreams are successful as content because it is content that each person experiences, not just learning about something "out there," that seems to have no personal relevance.

Further development of classroom exercises is possible in the adaptation of adult-oriented exercises to schools, with a focus on developing skills which would enable students to continue personal and transpersonal growth on their own time or after they graduate. Such books as *Mind Games*, *Awareness*, and *Passages* provide adult learning exercises. Educators can use these to continue their own growth and as sources for classroom adaptations. Under a grant from the Quebec Ministry of Education, the Canadian Institute of Psychosynthesis has developed classroom techniques for humanistic and transpersonal growth. In the United States, psychosynthesis groups in New York City and Redwood City, California, are adapting other growth techniques developed by Roberto Assagioli to the classroom and to counseling.

FUTURE TRENDS AND IMPLICATIONS

Research

Research in transpersonal educational psychology is currently at the exploratory and descriptive stages. However, some rough-hewn applications of transpersonal ideas show considerable promise. Whenever new practices come along, the door is open to common research, which compares and evaluates new methods. Descriptive and exploratory research by teachers indicates increased content learned, student enthusiasm, student self-control, excitement in self-exploration, and investigation of topics usually shunted to the side in traditional as well as innovative schools. Relaxation, focusing, meditation, and other transpersonal practices are open fields for traditional educational research.

The importance of subjective empiricism as a method of investigation should not be overlooked, nor should the experimenter imagine himself neutral during research.

> A discipline comes of age and a student of that discipline reaches maturity when it becomes possible to recognize, estimate, and allow for the errors of their tools. . . . Yet there is one instrument which every discipline uses without checking its errors, tacitly assuming that the instrument is error-free. This, of course, is the human psychological apparatus. As a result of the failure to consider the sources of error in the human being himself, when our academic disciplines assemble together in our great educational institutions, they re-enforce the tacit, fallacious assumption that man can understand the world that lies outside of himself without concurrently understanding himself. Actually, each man is his own microscope with his own idiosyncracies, to which he alone can penetrate.
>
> (Lawrence S. Kubie, "The Forgotten Man of Education")

Considering the state of consciousness as a major variable of all behavior is filled with implications. This is a previously disregarded variable in every experiment and during all teaching. If we erroneously assume there is only one state of consciousness or that all awake people are in the same state, we are neglecting this important variable. Various states of consciousness, their intensities or optimal combinations, may be a major set of variables for a new generation of educational researchers to study. Instead of changing the external stimuli given to a student, can we effect greater changes by teaching him to control his own state of consciousness?

Perhaps relaxation, receptivity, focusing, concentration, holistic perception, linear perception, reasoning, analysis, brain wave patterns, and left-brain and right-brain activity are some of the basic mental variables. Just as reading and arithmetic are foundation skills for the intellectual, left-brain activities, there may also be primary level skills such as fantasy, dreaming, concentration, and other skills that will allow us to develop and use the intuitive, right sides of our brains.

Teacher Education

During inservice education, teachers frequently go through three stages when they are introduced to transpersonal psychology. At first they are puzzled, put off, or simply confused. Since a transpersonal approach to education requires them to look at their work in a different light, this is not surprising. The next step is accepting one or two ideas for applying a transpersonal technique in their classrooms, or introducing some transpersonal content into their lessons. This is usually dreams, some form of ESP such as a classroom experiment, discussion of psychic phenomena, or a combination of relaxation and fantasy. Finally, having tried a transpersonal innovation, they are enthusiastic and eager to do more. I have found undergraduates generally more willing to accept transpersonal content such as ESP, psychic phenomena, and altered states of consciousness, while inservice teachers are more willing to believe that developing right brain potentials is worth doing and that it can be done.

Here is a new realm for teacher education. Along with the

cognitive, affective, and psychomotor domains, we now have the transpersonal domain. Each subject area has its transpersonal content too. Work needs to be done on a basic information level for teachers, objective writers, textbook publishers, testing services, and others in the educational support services who prepare materials. Much of the original transpersonal research needs to be rewritten so that school students can understand it. Some existing materials can be enlarged, while entirely new lines of transpersonal materials remain to be created.

How do we prepare teachers for their roles as transpersonal educators? A new kind of teacher education and a new breed of teacher-educators are needed too. Here is a wide-open opportunity for colleges of education. If we look back at the rise and fall of educational psychologies and the rise and fall of various colleges of education, we see that frequently certain schools staked out a new educational psychology and built much of their reputation on developing it. A good part of the reputation of Teacher's College at Columbia University was due to faculty members who were influential in the application of Freudian psychology to education. Stanford, Kansas, and other universities are making themselves well known in teacher education by applying behaviorism to education. Humanistic psychology applied to education is important at the colleges of education at the University of Massachusetts and at the University of California at Santa Barbara. While several institutions of higher education are flirting with transpersonal educational psychology, none has yet staked a claim and consciously built a reputation for transpersonal teacher education. Here too, there are more tantalizing possibilities than tested programs.

Philosophy

Our focus here has been primarily on those applications of transpersonal psychology which can be adapted to education immediately. However, the underlying philosophical assumptions have implications which go far beyond new teaching techniques, and which present new problems for educational philosophers to work on.

A transpersonal approach involves new, open concepts which

are still being developed and clarified. For example, the concept of *consciousness* carries a new meaning in this context. It has expanded to include many different subjective and physiological states of consciousness, and should not be confused with terms such as political consciousness or social consciousness. Currently there is considerable interest in theoretically conceptualizing, or "mapping," inner states, in exploring methods for altering consciousness, and in evaluating the importance of altered states.

The mind/body problem is central to transpersonal education. It is clear that mental and emotional states affect the body, and that physical states affect the mind and emotions. The implication here is that the relationship between body and mind is far more complex and important than was previously believed. Transpersonal psychology is concerned with the integration of physical, emotional, mental, and spiritual development. It also assumes that man as a living organism is continually evolving, and capable of developing many capacities which have hitherto been neglected. Since we are concerned with the growing edge of human development, we are continually expanding the range of topics and finding new ways of learning. The meaning of the word "knowledge" itself is changing and expanding. Knowledge is no longer limited to objective subject matter or content. Awareness of inner states, experiential learning, ESP, and control of various autonomic functions are forms of knowledge which are not being incorporated in education. Since inner states cannot be observed by anyone other than the experiencing subject, subjective empiricism has become an important method of investigation.

New cross-cultural values are also emerging. The study of peak experiences and human potentials has led to a new appreciation of Eastern philosophies, and new definitions of "the good." As communication with other cultures has expanded, we now have the opportunity to learn more about alternate methods of training the mind and body. Interestingly, contemporary physicists are now describing reality in terms which coincide with the traditional views of mystics from many different religious traditions. This view affirms the essential unity of all life. This basic unity of man with his fellow men, with the environment,

and with the cosmos is also affirmed in parapsychology, and is an underlying assumption in psychic healing and other psychic phenomena such as clairvoyance and telepathy. Researchers at the Menninger Foundation are investigating the speculation that there is a "field of mind" similar to the earth's magnetic field. Thoughts and ideas may exist in this field, and some people may even be able to tune in to it.

The emerging philosophy of education based on transpersonal psychology may be described as a combination of rational-analytic and intuitive-synthetic modes of knowing. With its origins in analytic philosophy, much educational thought has mistakenly equated "thinking" with "reasoning." Rational thinking, associated with the left hemisphere of the brain, is characteristically verbal, logical, analytic, and linear. Intuitive thinking, associated with the right hemisphere, is creative, holistic, visual, and pattern oriented. Its strength is in seeing similarities, patterns, and agreements among ideas rather than analyzing differences and conflicts. Intuitive perception frequently appears to transcend or anticipate reason. Philosophies of education which do not recognize the importance of developing right-brain hemisphere potentials are seriously underestimating the human capacity for learning.

> A man, having looted a city, was trying to sell an exquisite rug, one of the spoils. "Who will give 100 pieces of gold for this rug?" he cried throughout the town.
>
> After the sale was completed, a comrade approached the seller and asked, "Why did you not ask more for that priceless rug?" "Is there any number higher than 100?" asked the seller.
>
> (Folk Tale from Central Asia, quoted from *The Psychology of Consciousness*, Robert Ornstein)

A newly opened image of man assumes that we are capable of knowing, being, and doing far more than we thought possible even a decade ago. As we continue to learn more about transpersonal dimensions of human experience, our vision of the future and the development of human potentials is constantly expanding. It is important to recognize the necessity for educating the whole person if we are to improve the human condition. Explorations in the study of consciousness hold considerable promise for education in the future.

SUMMARY

Major ideas and topics of interest in transpersonal psychology have been discussed and illustrated with examples of their application to education. Current applications are the first steps in using transpersonal educational psychology and can be accepted as consistent with present goals, techniques, and content. They are also the first steps toward a new vision of what it means to be a person, our place in the universe, what we are capable of doing, what we can learn, and how we can learn. Although the emphasis here is on day-to-day use in schools, it is important to remember that this article focuses on a small part of a much broader panorama of mankind. Some initial steps for introducing this new vision of man to education have been suggested. Have we been underselling our human capacities due to an unrealistically limited view of ourselves? Exploration and research on the transpersonal frontiers of human consciousness is suggesting new horizons, transcending old limitations, and affirming the value of human life.

RECOMMENDED RESOURCES

Andersen, Marianne S. and Louis Savary, *Passages: A Guide for Pilgrims of the Mind*, Harper & Row, New York, 1973.

Exercises for relaxation and concentration, excerpts from many other authors which accompany the text, beautiful photographs, particularly good introductory experiences for adults that may be adapted for children, an easy-going, enjoyable book.

Green, Elmer E. and Alyce M. Green, "The Ins and Outs of Mind-Body Energy," pp. 137-147. *Science Year*, 1974. World Book Science Annual, Field Enterprises Educational Corporation, Chicago, Ill. 1973.

An easily readable summary of research from the Menninger Foundation having to do with biofeedback, Kirlian photography of auras, psychic healing, mental control of the body, and Eastern philosophy. Written at the junior high level, photographs, bibliography. Good introduction to the field.

Hartley Productions. Cat Rock Road, Cos Cob, Conn. 06807.

These are all color movies about half an hour in length for advanced high school, college, and adults. *Psychics, Saints, and Scientists:* Introduction to research in parapsychology, telepathic dreams, biofeedback, etc. *The Ultimate Mystery:* Awareness in plants, and yoghurt, psychic healing, acupuncture. Supports claim that there is communication among all living things. Fascinating. *Inner Spaces:* Astronaut Edgar Mitchell presents recent information on telepathy and the exploration of the unconscious, or inner space. *Biofeedback: Yoga of the West:* The Menninger Foundation's Dr. Elmer Green summarizes recent research at the foundation, investigates Indian yogis, and shows applications to education, medicine, and corrections. Can we teach our minds to control our bodies? "Yes," he answers. Exciting, thought-provoking.

Hendricks, Gay and Russell Wills, *The Centering Book: Transpersonal Educational Exercises*, Prentice-Hall, Englewood Cliffs, N.J. Forthcoming, 1975.

Activities for children, parents, and teachers: relaxation, centering, stretching, movement, dreams, guided imagery Sufi stories. Full of ideas for classroom exercises.

Journal of Transpersonal Psychology, P.O. Box 4437, Stanford, Calif. 94305.

A semi-annual publication, the one best source for keeping up-to-date in transpersonal psychology. Some articles are scholarly and technical, others easy to read.

Masters, R.E.L. and Jean Houston, *Mind Games: The Guide to Inner Space*, Delta/Dell, New York, 1973.

A book of mental exercises for altering consciousness, mostly group experiences for adults including improved perception, memory, and creativity, a yoga for the Western mind.

Ornstein, Robert, *The Psychology of Consciousness*, W. H. Freeman, San Francisco, Calif. 1973.

Excellent. Ornstein combines information on the right and left hemispheres of the brain with physiology, mysticism, altered consciousness, perceptual changes, and a host of other topics. What's more, he makes it fascinating reading even for someone with little or no psychological background. Currently used as a text in over 300 colleges and universities for everything from religion to physiology. Strongly recommended.

Ostrander, Sheila and Lynn Schroeder, *Psychic Discoveries Behind the Iron Curtain*, Bantam, 1970.

These authors report in a journalistic style about astounding developments in Russia and its satellites. It is an exciting and mind-opening book that strains credulity, but apparently is factual. They suggest the United States may be in a transpersonal race which makes other competition pale by comparison. A long book, but with chapters that may be read separately from each other. For people reading at adult levels.

Roberts, Thomas B. (ed.), "Transpersonal Psychology Applied to Education," Part 4 of *Four Psychologies Applied to Education*, Schenkman Publishing Co., Cambridge, Mass. 1974.

Contains an article on transpersonal psychology and its implications for education and anthologized writings by twenty-two other authors, also sections on Freudian, behavioral, and humanistic psychologies as they apply to education.

Stevens, John O. *Awareness: Exploring, Experimenting, Experiencing*, Bantam, New York, 1973.

Contains a curriculum of awareness exercises from simple techniques to more complex ones. Many adaptable to schools. A guide to enriching life.

Tart, Charles T. (ed.), *Altered States of Consciousness*, Anchor/Doubleday, Garden City, N.Y. 1972.

The classic anthology in the field. Readability varies from easy adult through difficult adult; contains sections on dreams, meditation, psychedelic drugs, hypnotism, and other topics. Lots of good factual information.

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